

What is claimed is:

1. A semiconductor processing system, comprising:
 - a chamber adapted to process a wafer, the chamber having an opening to facilitate access to the interior of the chamber;
 - 5 a lid coupled to the chamber opening, the lid having an open position and a closed position;
 - an actuator coupled to the lid to move the lid between the closed position and the open position; and
 - a floating pivot coupled to the lid and the actuator to align the lid with the opening when the lid closes.
- 10 2. The system of claim 1, further comprising a fixed pivot coupled to the lid and the actuator.
3. The system of claim 2, further comprising a guide link coupled to the fixed pivot.
- 15 4. The system of claim 1, further comprising a load link coupled to the floating pivot.
5. The system of claim 1, further comprising a guide shaft rotatably coupled to the load link.
- 20 6. The system of claim 1, further comprising a drive pivot positioned at one end of the load link.
7. The system of claim 6, further comprising a rod extending from the actuator coupled to the drive pivot to move the lid.

8. The system of claim 1, further comprising a support bracket coupled to the actuator and the chamber body.
9. The system of claim 1, wherein the actuator is air actuated or hydraulically actuated.
- 5 10. The system of claim 1, wherein the actuator is motorized.
11. A floating pivot to automatically align two objects, comprising:
a load link having first and second portions;
a bearing positioned between the first and second portions of the bearing; and
a self-centering spring coupled to the perimeter of the bearing.
- 10 12. The pivot of claim 11, further comprising a tension shim positioned between the load link and the bearing.
13. The pivot of claim 11, further comprising a pivot screw adapted to tighten the bearing.
- 15 14. The pivot of claim 11, wherein the self-centering spring comprises an O-ring.
15. The pivot of claim 11, further comprising a lid coupled to a first end of the load link.
16. The pivot of claim 11, further comprising a chamber body coupled to a second end of the load link.
- 20 17. The pivot of claim 11, wherein the self-centering spring comprises leaf springs.
18. The pivot of claim 11, wherein the self-centering spring allows radial movements.

19. The pivot of claim 11, wherein the self-centering spring allows axial movements.
20. The pivot of claim 11, wherein the self-centering spring allows radial and axial movements.
- 5 21. The pivot of claim 11, wherein the self-centering spring allows self-centering of a lid to a chamber body.
22. The pivot of claim 11, wherein the self-centering spring comprises coil springs.
- 10 23. The pivot of claim 11, wherein the self-centering spring comprises leaf and coil springs, O-rings, and leaf springs or O-rings and coil springs.
24. A semiconductor processing system, comprising:
- a chamber adapted to process a wafer, the chamber having an opening to facilitate access to the interior of the chamber; and
- 15 a lid coupled to the chamber opening, the lid having an open position and a closed position, the open and closed positions being moved horizontally in a substantially parallel manner relative to the opening; and
- an actuator coupled to the lid to move the lid between the closed position and the open position.
- 20 25. The system of claim 24, further comprising a floating pivot to automatically align the lid to the body of the chamber.
26. The system of claim 25, wherein the pivot further comprises:
- a load link having first and second portions;

a bearing positioned between the first and second portions of the bearing; and
a self-centering spring coupled to the perimeter of the bearing.